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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/680,721	10/06/2000	Frederick Browne Gregg	64908	2099

7590

07/22/2002

Christopher F. Regan Esquire  
Allen Dyer Doppelt Milbrath & Gilchrist PA  
PO Box 3791  
Orlando, FL 32802-3791

EXAMINER

RUDDOCK, ULA CORINNA

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 07/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Keep in case

MF-10

**Office Action Summary**

Application No.

09/680,721

Applicant(s)

Gregg et al.

Examiner

Ula Corinna Ruddock

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Apr 30, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above, claim(s) 39-53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2, 5, 6
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Election/Restriction***

1. Applicant's election with traverse of Group I in Paper No. 9 is acknowledged. The traversal is on the ground(s) that searching both groups would not be a serious burden. This is not found persuasive because the restriction requirement of Paper No. 8 sets forth two distinct and independent inventions. As a result, the Examiner would be burdened by searching both sets of claims.

The requirement is still deemed proper and is therefore made FINAL.

### ***Information Disclosure Statement***

2. The information disclosure statements filed October 2000, February 2001, January 2002, and February 2002 have been considered.

### ***Specification***

3. The abstract of the disclosure is objected to because it is too long. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 102 (b) as being anticipated by EP 503383 (EP '383). EP '383 discloses a fire resistant plasterboard that has a plaster core containing cut mineral fibers, especially glass fibers, and aerated concrete granulate. It should be noted that plasterboard inherently has two opposing surfaces. The glass fiber web is coated with an inorganic binder which is at least partly hardened. It should be also noted that the Examiner is equating the inorganic binder of EP '383 to the moisture-resistant material that incorporates the fibers of the present invention. A complete translation of this document has been ordered.

6. Claims 1-4, 6, 7, 11, 14, 17, 18, 20, 21, and 25 are rejected under 35 U.S.C. 102 (b) as being anticipated by WO 95/11357 (WO '357). WO '357 discloses a cement panel comprising a core of aerated concrete and a surface finish on both sides, reinforced with a fiberglass net (page 2, In 16-20). According to *Fairchild's Dictionary of Textiles*, a net is a general term for an open fabric formed by weaving (i.e. a woven net). As a result, it is the Examiner's position that the fiberglass net of WO '357 is a woven mesh as required by the present invention. With regard to claims 6 and 20, according to Figure 1, the fiberglass net is on both surfaces of the aerated concrete core. It should be noted that a cement panel such as the one described by WO '357 inherently has two opposing surfaces. The aerated concrete in the panel has preferably a specific weight (i.e. density)

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of 0.3 to 0.8 kg/dm<sup>3</sup> or 18.72 to 49.94 lb/ft (page 3, ln 8-10). It should also be noted that specific weight and density are the same things, as taught by Henrich (US 6,255,391 at col 3, ln 40).

According to Figure 1, the panel is generally rectangular as required by the present invention and inherently has opposing side edges and a pair of opposing end edges. Furthermore, the standard width of the panel is 1.2 meters or 3.93 feet (page 3, ln 34).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 12, 15, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357), as set forth above. WO '357 discloses the claimed invention except for the teaching that the core has a thickness in a range of about 1/4 to 1 inch and that the core has a length in a range of about 5 to 16 feet. It should be noted that the optimizing the thickness and the length of the core are result effective variables. A thicker core would directly effect the strength of the entire panel. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used a core having a thickness in a range of about 1/4 to 1 inch and a core having a length in a range of about 5 to 16 feet, since it has been held that

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discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have optimized both the thickness and length of the core motivated by the desire to obtain a panel with increased strength.

9. Claims 8 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357), as set forth above, in view of Lawlis et al. (US 4,065,333). WO '357 discloses the claimed invention except for the teaching that the surface has beveled portions. Lawlis et al. disclose a wallboard having side edges each having a flat portion and also a beveled portion adjacent the front face (col 1, ln 67-68 to col 2, ln 1). It would have been obvious to have beveled the edges of the surface of WO '357 as taught by Lawlis et al. motivated by the desire to obtain a panel that results in ease of handling and installation.

10. Claims 9, 10, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357), as set forth above, in view of Ensminger et al. (US 5,221,386). WO 95/11357 discloses the claimed invention except for the teaching that the moisture-resistant face layer (i.e. the mesh) extends around the opposing side edges and that the opposing end edges of the core are exposed. Ensminger et al. disclose a cement board having reinforced edges. The woven glass fiber mesh (col 4, ln 53) is folded over the concrete mix (col 4, ln 4-5). Ensminger et al. also disclose cutting away the mat from the border regions of the upper composite web (col 3,

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In 3-5), which the Examiner is equating to the disclosure by the present invention of opposing end edges of the core being exposed . It would have been obvious to one having ordinary skill in the art to have used Ensminger's teaching of folding a mesh over the edges of the concrete core on the woven mesh of WO '357, motivated by the desire to obtain a panel with increased resistance to shattering. It also would have been obvious to one having ordinary skill in the art to cut away the mat from the border regions of the upper composite web as taught by Ensminger et al. on the panel of WO '357, motivated by the desire to improve adhesive bonding between the core and the moisture-resistant material.

11. Claims 13 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357), as set forth above, in view of Restrepo (US 4,407,676). WO '357 discloses the claimed invention except for the teaching that the core further comprises reinforcing fibers in the aerated concrete. Restrepo discloses fiber-reinforced cement. The lightweight concrete is known as aerated concrete (col 3, ln 22-24). Plastic fibers are used to reinforce the cementitious matrix (col 4, ln 17-20). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the reinforcing plastic fibers of Restrepo in the core of WO '357, motivated by the desire to obtain a concrete core with increased resistance to tensile loads and impact loading.

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12. Claims 16 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357), as set forth above, in view of King (US 5,002,620). WO '357 discloses the claimed invention except for the teaching that the core comprises first and second portions aligned in end-to-end relation at respective opposing edges thereof and that an adhesive layer joins the opposing edges of the first and second portions together. King disclose fiber-reinforced cellular concrete. The finished sheets of concrete are then cut to a desired length and the lightweight fractions from opposed sheets are bonded together in sandwich form. A suitable resin is disposed between the opposed lightweight fractions (col 4, ln 12-21). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used King's method of bonding the finished opposed sheets with a suitable resin on the panel of WO '357, motivated by the desire to obtain a panel that can be easily manufactured and transported.

13. Claims 5, 19, 29, 30, 31, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357), in view of EP 503383 (EP '383). WO '357 discloses a cement panel comprising a core of aerated concrete and a surface finish on both sides, reinforced with a fiberglass net (page 2, ln 16-20). According to *Fairchild's Dictionary of Textiles*, a net is a general term for an open fabric formed by weaving (i.e. a woven net). As a result, it is the Examiner's position that the fiberglass net of WO '357 is a woven mesh as required by the present invention. It should be noted that a cement panel such as the one described by WO '357 inherently



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has two opposing surfaces. With regard to claim 35, the aerated concrete in the panel has preferably a specific weight (i.e. density) of 0.3 to 0.8 kg/dm<sup>3</sup> or 18.72 to 49.94 lb/ft<sup>3</sup> (page 3, ln 8-10). It should also be noted that specific weight and density are the same things, as taught by Henrich (US 6,255,391 at col 3, ln 40). With regard to claim 31, according to Figure 1, the panel is generally rectangular as required by the present invention and inherently has opposing side edges and a pair of opposing end edges. In addition, Figure 1 shows that the fiberglass net is on both surfaces of the aerated concrete core. Furthermore, the standard width of the panel is 1.2 meters or 3.93 feet (page 3, ln 34). WO 95/11357 disclose the claimed invention except for the teaching that the moisture-resistant face layer further comprises a moisture-resistant material incorporating the fibers.

EP '383 discloses a fire resistant plasterboard that has a plaster core containing cut mineral fibers, especially glass fibers, and aerated concrete granulate. The glass fiber web is coated with an inorganic binder which is at least partly hardened. It should be also noted that the Examiner is equating the inorganic binder of EP '383 to the moisture-resistant material that incorporates the fibers of the present invention. A complete translation of this document has been ordered. With regard to claims 5, 19, 29, and 30, it would have been obvious to use the inorganic binder of EP '383 on the fiberglass reinforced panel of WO '357, motivated by the desire to enhance the panel's resistance to water and to shock and aging.

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With regard to claim 36, WO '357 discloses the claimed invention except for the teaching that the core has a thickness in a range of about 1/4 to 1 inch. It should be noted that the optimizing the thickness of the core is a result effective variable. A thicker core would directly effect the strength of the entire panel. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used a core having a thickness in a range of about 1/4 to 1 inch, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have optimized the thickness of the core motivated by the desire to obtain a panel with increased strength.

14. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357) and EP 503383 (EP '383), as applied to claims 29-31, 35, and 36 above, and further in view of Lawlis et al. (US 4,065,333). WO '357 and EP '383 disclose the claimed invention except for the teaching that the surface has beveled portions. Lawlis et al. disclose a wallboard having side edges each having a flat portion and also a beveled portion adjacent the front face (col 1, ln 67-68 to col 2, ln 1). It would have been obvious to have beveled the edges of the surface of WO '357 and EP '383 as taught by Lawlis et al. motivated by the desire to obtain a panel that results in ease of handling and installation.

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15. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357) and EP 503383 (EP '383), as applied to claims 29-31, 35, and 36 above, and further in view of Ensminger et al. (US 5,221,386). WO '357 and EP '383 disclose the claimed invention except for the teaching that the moisture-resistant face layer (i.e. the mesh) extends around the opposing side edges and that the opposing end edges of the core are exposed. Ensminger et al. disclose a cement board having reinforced edges. The woven glass fiber mesh (col 4, ln 53) is folded over the concrete mix (col 4, ln 4-5). Ensminger et al. also disclose cutting away the mat from the border regions of the upper composite web (col 3, ln 3-5), which the Examiner is equating to the disclosure by the present invention having opposing end edges of the core being exposed. It would have been obvious to one having ordinary skill in the art to have used Ensminger's teaching of folding a mesh over the edges of the concrete core on the woven mesh of WO '357 and EP '383, motivated by the desire to obtain a panel with increased resistance to shattering. It also would have been obvious to one having ordinary skill in the art at the time the invention was made to cut away the mat from the border regions of the upper composite web as taught by Ensminger et al. on the panel of WO '357 and EP '383, motivated by the desire to improve adhesive bonding between the core and the moisture-resistant material.

16. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357) and EP 503383 (EP '383), as applied to claims 29-31, 35, and 36 above, and further in view

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of Restrepo (US 4,407,676). WO '357 and EP '383 disclose the claimed invention except for the teaching that the core further comprises reinforcing fibers in the aerated concrete. Restrepo discloses fiber-reinforced cement. The lightweight concrete is known as aerated concrete (col 3, ln 22-24). Plastic fibers are used to reinforce the cementitious matrix (col 4, ln 17-20). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the reinforcing plastic fibers of Restrepo in the core of WO '357 and EP '383, motivated by the desire to obtain a concrete core with increased resistance to tensile loads and impact loading.

17. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/11357 (WO '357) and EP 503383 (EP '383), as applied to claims 29-31, 35, and 36 above, and further in view of King (US 5,002,620). WO '357 and EP '383 disclose the claimed invention except for the teaching that the core comprises first and second portions aligned in end-to-end relation at respective opposing edges thereof and that an adhesive layer joins the opposing edges of the first and second portions together. King disclose fiber-reinforced cellular concrete. The finished sheets of concrete are then cut to a desired length and the lightweight fractions from opposed sheets are bonded together in sandwich form. A suitable resin is disposed between the opposed lightweight fractions (col 4, ln 12-21). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used King's method of bonding the finished opposed sheets

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with a suitable resin on the panel of WO '357 and EP '383, motivated by the desire to obtain a panel that can be easily manufactured and transported.

**Conclusion**

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is (703) 305-0066. The Examiner can normally be reached Monday through Thursday from 6:30 AM to 5 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor Terrel Morris can be reached at (703) 308-2414.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-2351.

Ula C. Ruddock  
Patent Examiner  
Art Unit 1771  
July 15, 2002

*Ula Ruddock*